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ABSTRACT

Data and analysis of the geographic distribution of students attending Athabasca University in Alberta, Canada, are presented. Attention is directed to student distribution by: Alberta census division, Alberta municipality, urban-rural area, and province and territory. Measurement of student representation is based on the extent to which Athabasca University draws its students evenly or unevenly from various geographic areas in comparison to Canadian population distribution. Data for 1981-1982 and trends since 1978-1979 are covered. The following trends appear to be continuing for 1981-1982: (1) growth of the student population excells for Alberta (30 percent); (2) there has been no significant increase in the student population ou side Alberta; (3) almost half of the student body is from Edmonton or Calgary: and (4) Fort McMurray remains the best represented major urban center in Alberta, even with a slowdown in its rate of student population growth. The student population of Athabasca University has remained about 70 percent from urban areas and 30 percent from rural areas. The southern part of Alberta was the least represented area at the university. Based on the trends, it is suggested that Athabasca University should consolidate and improve its representation in major urban centers of Alberta. Definitions of terms are included. (SW)

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REPORT

GEOGRAPHIC DISTRIBUTION OF ATHABASCA UNIVERSITY STUDENTS

Prepared by John Smyrnew, April, 1983.

Institutional Studies Report No. 3

Athabasca University

OFFICE OF INSTITUTIONAL STUDIES

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Office of Institutional Studies
Athabasca University
12352-149 Street
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Acknowledgements and Preface

The production of this report would have been much more difficult had it not been for the cooperation and support of several colleagues at Athabasca University. In particular, the technical support provided by Steven Farkas of Computing Services during the typesetting of this report (not to mention his endless patience), Shelby Briggs of Media Services for her painstaking help in preparation of the graphics, and Tomislav Milinusic for his editorial work and numerous suggestions.

This report is the third in a new series of *Institutional Studies Reports* to be produced and released by the Office of Institutional Studies. A list of reports already available and those forthcoming may be obtained by writing to the address below.

In a continuing effort to improve the content and format of future reports in the series, you feedback is solicited. A form for reader's comments and enquiries is provided at the back of this report. If the form has been removed, comments may be addressed to the Office of Institutional Studies, Athabasca University, 12352-149 Street, Edmonton, Alberta, Canada, T5V 1G9. We are looking forward to your feedback.

EXECUTIVE SUMMARY

This report is a follow-up to the reports on geographic distribution of Athabasca University students produced by Institutional Studies in 1979, 1980, and 1981. The trends noted previously appear to be continuing. They include:

(1) Growth of the student population within Alberta (30 per cent) remains the healthiest of all provinces;

(2) That there has been no significant increase in the student population outside Alberta;

(3) The student population continues to be dominated by students from the major urban centres of Edmonton (39 per cent), and Calgary (19 per cent);

(4) Both major urban centres of Edmonton and Calgary experienced a significant student population increase in the magnitude of 25 and 36 per cent respectively since 1980/81, and;

(5) Fort McMurray remains the best represented major urban centre in Alberta, even with a slowdown in its rate of student population growth.

INTRODUCTION

Since the establishment of Athabasca University in 1970, the institution's student body has year by year become more widely distributed geographically. During the past fiscal year, the university had students from every province and territory in Canada registered in courses. This characteristic has in several ways profoundly affected the allocation of resources and operational planning of the university. In this context, the decentralization of certain administrative functions, the strategic geographic placement of computing equipment and human resources such as tutors and coordinators, as well as the location of library and laboratory facilities must all be carefully scrutinized and allocated to maximize their benefit to the university. Moreover, little is known about the relative representation of Athabasca University students in geographic areas when compared to the general population. Any marketing initiatives undertaken by the university ought to be based on knowledge of market penetration and recruitment potential within given geographic areas.

The study is concerned with analyzing the geographic distribution of Athabasca University students. Its purpose is to provide some basic data and information that might be used as input into the decision-making processes outlined above. As such, it addresses itself specifically to reporting the geographic location of students admitted to Athabasca University and their relative geographic representation during the fiscal year 1981/82. It is the first of its type and is a consolidation of the *Urban-Rural Distribution of Athabasca University Students* (Shale, 1981) and, *Geographic Distribution of Athabasca University Students* (Hammer, 1979, 1980, 1981) reports produced intermittently since 1979 by the Office of Institutional Studies. The significant points of those reports were:

(1) The Fort McMurray area (contained within census division 12) was the "best" represented geographic location for Athabasca University students in Alberta;

(2) the southern part of Alberta was the least represented;

(3) admissions grew the fastest in the Calgary area (contained within census division 6), increasing 194 per cent from 1978/79 to 1980/81 (a 166 per cent growth rate alone was recorded between 1979/80 and 1980/81);

(4) significantly large increases in admissions were reported for Edmonton (58.5 per cent), Red Deer, and Grande Prairie during the same 3 year period;

(5) the student population of Athabasca University has remained about 70 per cent urban based and 30 per cent rural, reflecting a slightly higher draw of urban to rural students when compared to the Alberta population, and;

(6) almost half of the entire Athabasca University student body were from Edmonton or Calgary.

The levels of geographic aggregation considered in this study include the distribution of Athabasca University students (and affiliated institutions) nationally, as well as provincially and by municipality within Alberta. Measurement of student representation was based on the extent to which Athabasca University was able to draw its students evenly or unevenly from various geographic areas in comparison to the Canadian population.

The format of this report is traditional. However, a brief description of its contents are in order. Owing to the year round nature of student admissions and the resultant unorthodox admission policies of Athabasca University, several key terms referred to in this report are defined in the following section. Some of the necessary background

details on how the statistics were generated and how they should be interpreted are situated in the "Data and Method" section of the report. Analytical and summary comments, along with figures and tables used to complement the text of the report are found in subsequent sections.

DEFINITIONS

CENSUS DIVISION:
The general term applying to counties, regional districts, regional municipalities and five other types of geographic areas made up of groups of census subdivisions.

URBAN:
An area having a population concentration of 1,000 or more and a population density of 400 or more per square kilometer.[1]

RURAL:
Refers to all territory lying outside "urban" areas.

FISCAL YEAR:
The twelve month period of fiscal operations specified in *The Universities Act* (April 1 to March 31).

OUT-OF-REGION RESIDENTS:
Students who reside in Canada outside Alberta, British Columbia, the Yukon, Saskatchewan, and the Northwest Territories may register in Athabasca University courses on a home study schedule. Although these students are given tutorial and marking services, contact with the tutor must be initiated by the student who can call the tutor collect. Only students residing in Canada may register in Athabasca University courses.

COURSE REGISTRATION:
A student generates one course registration for each course in which he or she is registered. The term "enrolment" was officially changed to "registration" during 1981/82. Where the term "enrolment" was used in past reports its meaning is synonymous to "registration". Often course registrations will usually exceed student admissions by about one-third. Course registrations are calculated at the "start date" of a course.

ADMISSION:
A student generates one admission when he or she is formally admitted to the university. University policy permits students to be admitted to programs at any time during the year.

POSTAL CODE:
The six-character postal code is of the form ANA NAN, where "A" represents a letter and "N" represents a number. The first letter indicates a province, or a large part of the province in Ontario and Quebec (see Appendix 2). The first three characters of the postal code represent what is termed a "Forward Sortation Area" (FSA) and the second three a "Local Delivery Unit" (LDU). FSA codes of the form A(zero)A always refer to

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[1] As defined in Statistics Canada. (1982). *1981 Census Dictionary.* Catalogue No. 99-901. Ottawa, Ontario: Ministry of Supply and Services Canada.

rural areas, and those of the form A(1 to 9)A to urban areas.

1.0 DATA AND METHOD

The 1970's have seen an increasing demand for a large variety of statistics based on geographic areas (see Rothwell, 1977; Milinusic, 1981). Unfortunately, experience has shown that it is time-consuming and expensive to assign codes for municipalities, census divisions, and other geographic entities to data items on large files by clerical procedures. However, when the six-character postal code of the post office came into existence several years ago, it quickly became evident that this system would be a good way of automating the geographical coding of data items. It should be pointed out, that the use of the postal code in this study as a geographic identifier to determine the location of Athabasca University students came about as a matter of functional necessity to the university rather than as a research effort in and of itself.

The postal code information is taken from the student's mailing address on the university's General Admission Form and entered into the computerized Athabasca University Student Record System.[2] On forms where a postal code has not been provided by the student and a partial address has been written in (consisting of a street address and municipality name), an effort is made to determine the postal code. This is usually done by looking up the partial address in a Postal Code Directory provided by the post office or through a follow-up letter to the student requesting information to complete the address.[3]

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[2] The Athabasca University Student Record System is based on the SPIRES database management system running at The University of Alberta.

[3] Even with these extraordinary measures to have complete address information entered into the Student Record System, it is estimated that 5-10 per cent of all addresses on the database have either incomplete or invalid postal codes.

Owing to the inflexibility of the host database management system to handle data manipulation and statistical processing, a special "relational" type database had to be created for the study.[4] The resulting database was based on students who started a course during the fiscal year 1981/82 and consisted of 5,314 records. These records were both iteratively machine edited according to a table of valid postal codes for Canada obtained from Statistics Canada and manually corrected. Those postal codes that could not be "cleaned" owing to lack of information from the original General Admission Form, unavailability, or because a student was an out-of-Canada resident, were classified and coded as "Missing". Utilizing the "record linkage" method (see Colledge, 1978; Whitaker, et al., 1981), software was written to match the postal codes of the selected student records with a translator file of geographic attributes noted in Appendix 1.

Statistical analysis and data manipulation was done using the Statistical Package for the Social Sciences (SPSS) and MARK IV system. Graphics were generated by the Display Intergrated System and Plotting Language (DISSPLA) from summary statistics on a CALCOMP 1051 plotter. The census division population estimates for Alberta were obtained from the Alberta Bureau of Statistics. Information on the Canadian population was taken from the Statistics Canada 1981 census.

Percentage participation figures were calculated for each geographic area (whether it be census division or urban-rural area) by dividing the number of new students registered from each geographic area by the total Athabasca University students who registered during the 1981/82 fiscal year. A "performance ratio" was then calculated for each geographic area within an aggregation level by using the following equation:

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[4] All information in a relational database is represented by values in tables (even table names appear as character strings in at least one table). As a result, relationships among two or more variables may be represented or linked by a data structure.

$$PR = \frac{TOTAU}{TOTPOP}$$

where, PR is the performance ratio, TOTAU represents the percentage of total Athabasca University students within a geographic area and TOTPOP represents percentage of the total population within the same geographic area.

Performance ratios of this type are best interpreted through comparison of one value to another, rather than attempting to understand indicators of magnitude as absolutes. For example, knowing that the performance ratio for geographic area "A" is 4.3 would not be particularly useful. However, when speaking in relative terms that the next largest performance ratio was 1.5 for geographic area "B", we would then know considerably more about relative student representation from these geographic areas. Moreover, when performance ratios are monitored over several years, this information would provide a measurement of the relative success of attracting students from any given geographic area.

2.0 ANALYSIS

In this section of the report, major findings are highlighted and discussed. There were four levels of geographic aggregation analyzed and each are treated separately below. As a result of boundary and definition changes during the time period being addressed in the study (fiscal years 1978/79 to 1981/82), every effort was made to standardize numbers. However, several inconsistencies remain and wherever recognized in figures or text have been appropriately footnoted with an explanation.

2.1 Distribution by Alberta Census Division

As in past years, the largest group of students have come from census division 11, that has Edmonton as its major urban centre (39.55 per cent) and census division 6, that is represented by Calgary (19.12). A detailed summary of results at this level of geographic aggregation is contained in Table 1 and graphically displayed in Figure 4. The largest numeric increase in students was from the Edmonton area, where the student population increased from 1,167 in fiscal year 1980/81, to 1,462 in fiscal year 1981/82, an increase of about 25 per cent. This was closely followed by Calgary area, where the student population increased 36 per cent during the same period from 521 to 707 students. It should be pointed out that the healthiest student population growth in Alberta has been from the Calgary area, increasing its share of the total Alberta student population from 10.36 per cent in fiscal year 1978/79 to 19.12 per cent during fiscal year 1981/82 (see Table 1 and 3). Conversely, the Fort McMurray area has experienced a slight but persistent decrease in its share of the total Alberta population, with its 14.5 per cent share of the student population in fiscal year 1980/81 slipping to 12.4 per cent in fiscal year 1981/82. This occurred even with a small student population increase of 414 to 460

during the same period. Nevertheless, when general performance ratios are considered (see Figure 5 and Table 1), the Fort McMurray area with a performance ratio of 3.31 remains by far the best represented major urban centre in Alberta. Other major urban centres with high performance ratios in descending order include Banff (1.60), Grande Prairie (1.51), Athabasca (1.28), and Edmonton (1.16).

2.2 Distribution by Alberta Municipality

The level of geographic aggregation considered in this section is significantly different than the one looked at in the previous section. The information reported here is at the municipality or corporate boundary level. It should be of major interest to those involved in the allocation of university resources to identify focal points of Athabasca University student activity in Alberta. The level of geographic aggregation analyzed in this section is at a much finer level than will be discussed elsewhere in this report. As a result, it presents a detailed "snap-shot" of Athabasca University students with regards to their geographic clustering and dispersal in Alberta.

Not withstanding the above, Edmonton and Calgary remain the major municipalities in which students are located in Alberta, with a 20.2 per cent and 12.1 per cent share of the total accountable student population respectively (see Table 8). Only 4.1 per cent of all students are from Fort McMurray itself, which on the surface appears to conflict with the statistics in Tables 1 and 2. However, the role of Fort McMurray may be interpreted to be one of a regional "hub", which feeds off a hinterland made up of many smaller rural centres in its immediate geographic vicinity. As well, it should be pointed out that municipalities such as Sherwood Park, Spruce Grove, Fort Saskatchewan, and St. Albert, even though reported here as seemingly independent municipalities, are part of the greater Edmonton metropolitan area. It is most likely

that the same situation exists for the greater Calgary metropolitan area but to a lesser extent.

A final noteworthy point, concerns the 18.7 per cent of all students situated in municipalities classified as "Other". By definition, these municipalities may comprise of no more that 20 students in each, suggesting that there are roughly 50 smaller communities throughout Alberta with individuals taking courses through Athabasca University.[5] Athabasca University's geographically distributed student population is well illustrated in Figure 2, which shows a large clustering of students in the greater metropolitan areas of Edmonton and Calgary, and in a corridor between both centres; a heavy scattering of students throughout the remainder of north-central Alberta, and; a widely dispersed and negligible student population in southern Alberta.

2.3 Distribution by Urban-Rural Area

Approximately two-thirds (63 per cent) of Athabasca University's students are located in urbanized areas of Canada, keeping in mind that almost the entire student population comes from western Canada, i.e. west of Manitoba. However, within Alberta where 70 per cent of the whole student population is located, a significant one-quarter (26.3 per cent or 1,338 students) are from rural areas of Alberta. As well, large performance ratios for rural portions of Alberta census divisions were discerned for sizeable urban centres such as Banff (3.58), Fort McMurray (2.88), Grande Prairie (1.60), Hinton (1.50), and Athabasca (1.17). This information would seem to support the notion mentioned in section 2.2, that Fort McMurray derives many of its its students from a regional pool. More detailed information on this particular characteristic of students in

[5] The estimate of 50 smaller communitiers is based on 995 students classified as "Other", divided by 20 students per municipality.

Alberta is available from Table 7, and well illustrated in Figure 3. In urban Alberta, by far the most important performance ratios were recorded for census divisions consisting of the major urban centres of Fort McMurrary (3.10), and Edmonton (1.46).

2.4 Distribution by Province and Territory

Athabasca University has historically been a western Canada based post-secondary educational institution. With an insignificant number of students (4 per cent) located in eastern Canada, i.e. east of Manitoba, this trend in all likelihood is not expected to change. The student population in Alberta has been growing constantly at a rate of about 20 per cent a year, from 1,708 students in fiscal year 1978/79 to 3,697 students in fiscal year 1981/82. In Saskatchewan, the student population almost doubled from 90 in fiscal year 1980/81 to 163 in fiscal year 1981/82 (most likely as a result of new initiatives by Lakeland College in Lloydminster, Alberta). However, generally the student population outside Alberta has not grown significantly over the past four fiscal years, both in real numbers and percentages (see Figure 1). This might be attributed to the limited pool of students that affiliated institutions outside Alberta are able to draw on, and the restricting factor of limited support resources for students at these institutions. Admission of students located in British Columbia (mainly from North Island College), grew by only 29 students from the most previously high fiscal year in 1979/80. For that matter, the number of students located in British Columbia dropped to 900 in fiscal year 1980/81 from 1,032 in fiscal year 1979/80.

CONCLUSIONS

Based on the high performance ratio comparison, Athabasca University should attempt to consolidate and improve its representation in major urban centres of Alberta. In particular, the university might move to consolidate itself in "regional" centres such as Fort McMurray, Grande Prairie, Banff, and of course Edmonton, and Calgary through increased services. Of obvious concern is the possibility of having well established markets such as Fort McMurray slowly drying up. At the same time, future marketing initiatives might also be oriented towards these specific geographic regions.

A further analysis of demographic characteristics of Athabasca university students by geographic areas is required. Information gathered from this type of study would provide some idea about why certain geographic areas are so well represented and others such as southern Alberta poorly represented by Athabasca University students.

Finally, some thought might be given in trying to improve the market penetration efforts in areas east of Manitoba. The market is a large one and has remained untouched. Similar efforts, might be attempted at the western Canada market outside Alberta that has remained at the same level of activity for sometime.

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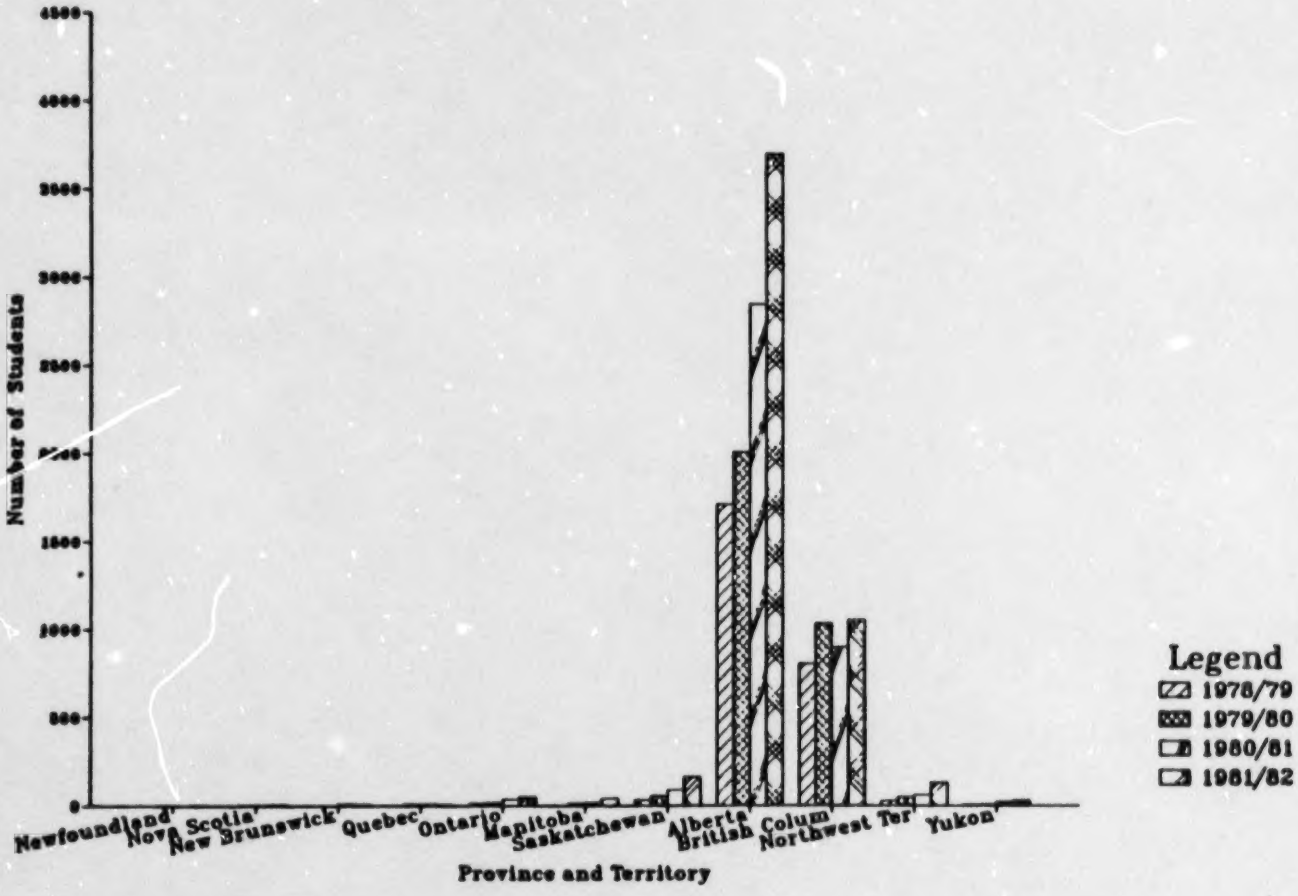
Figure 1.
Geographic Distribution of Athabasca University Students by Province and Territory from Fiscal Years 1978/79 to 1981/82



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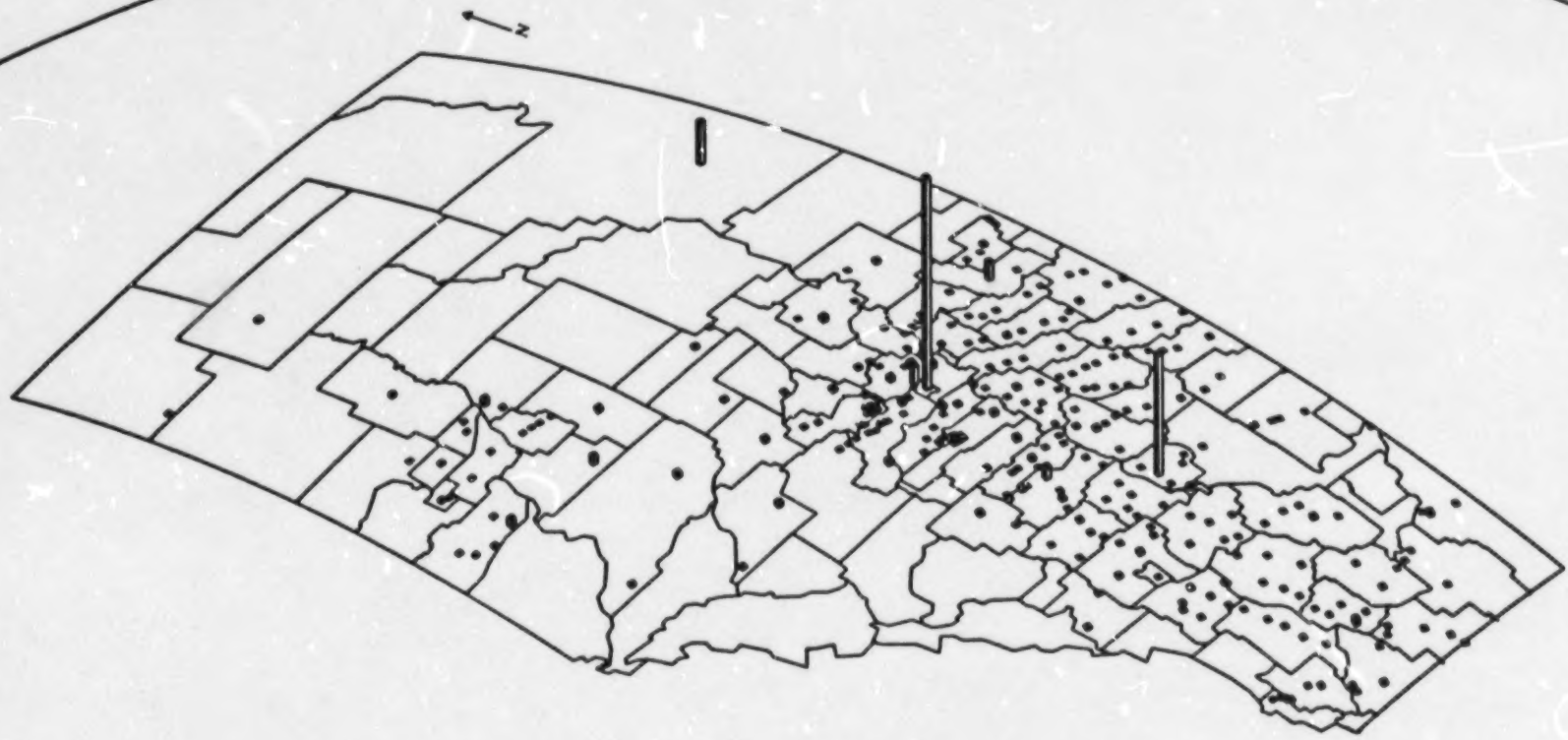

Figure 2.
Geographic Distribution of Athabasca University Students by Alberta Municipality in Fiscal Year 1981/82

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Figure 5.
Urban-Rural Geographic Distribution of Athabasca University Students by Province and Territory in Fiscal Year 1981/82

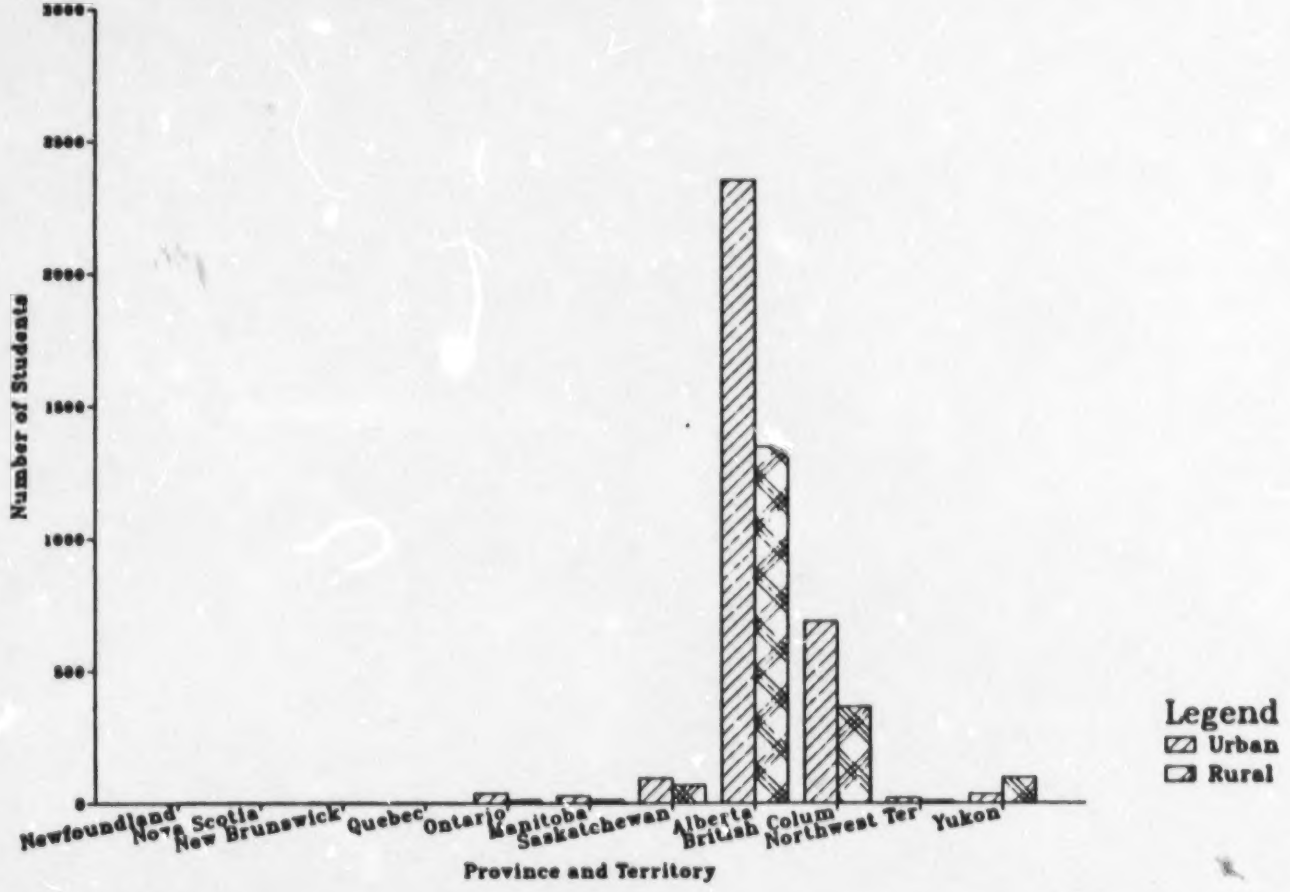

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Figure 4.
Geographic Distribution of Athabasca University Students by Alberta Census Division from Fiscal Years 1978/79 to 1981/82

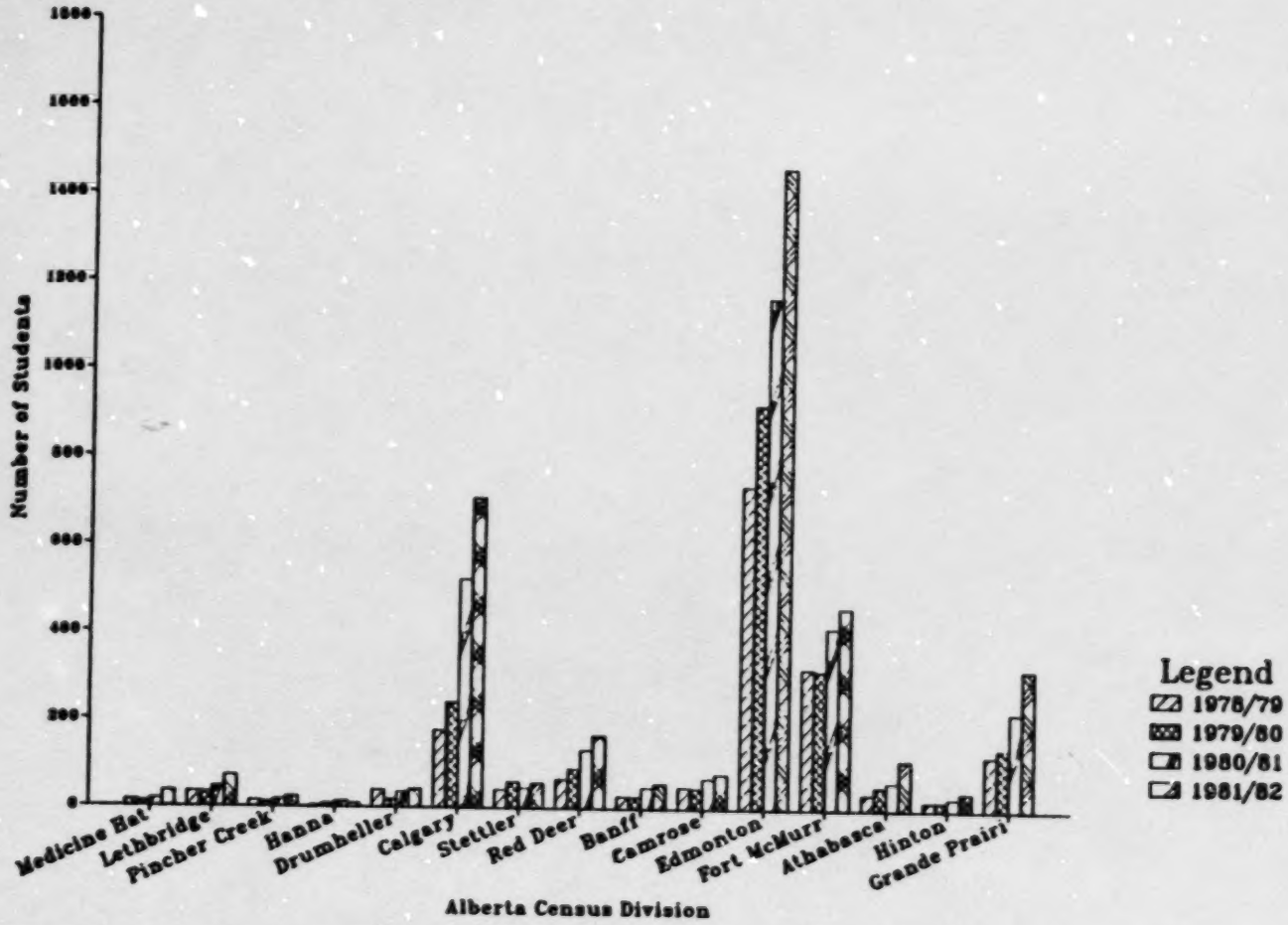

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Figure 5.
Performance Ratio Comparison of Athabasca University Students by Alberta Census Division from Fiscal Years 1978/79 to 1981/82

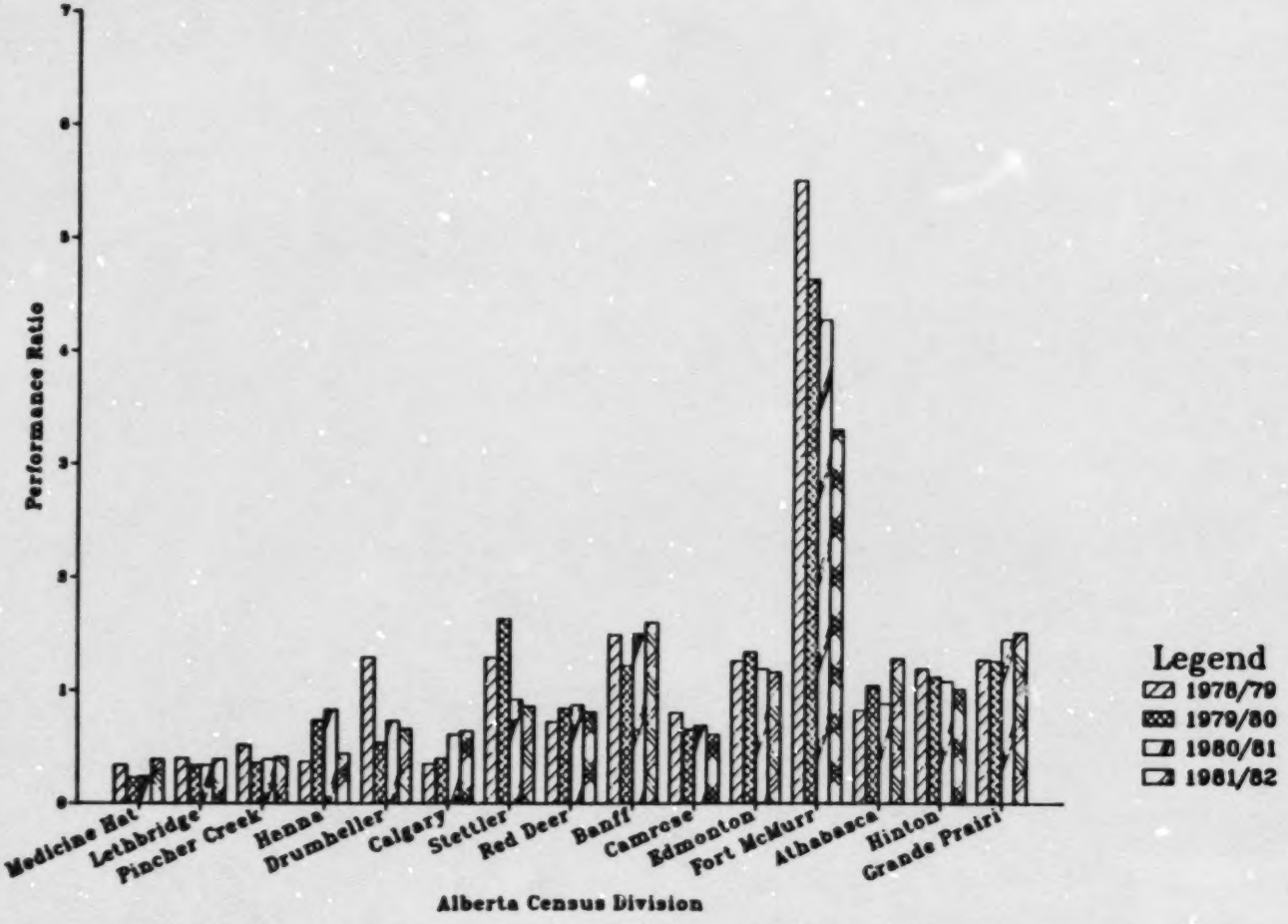

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Figure 6.
Urban-Rural Performance Ratio Comparison of Athabasca University Students by Alberta Census Division in Fiscal Year 1981/82

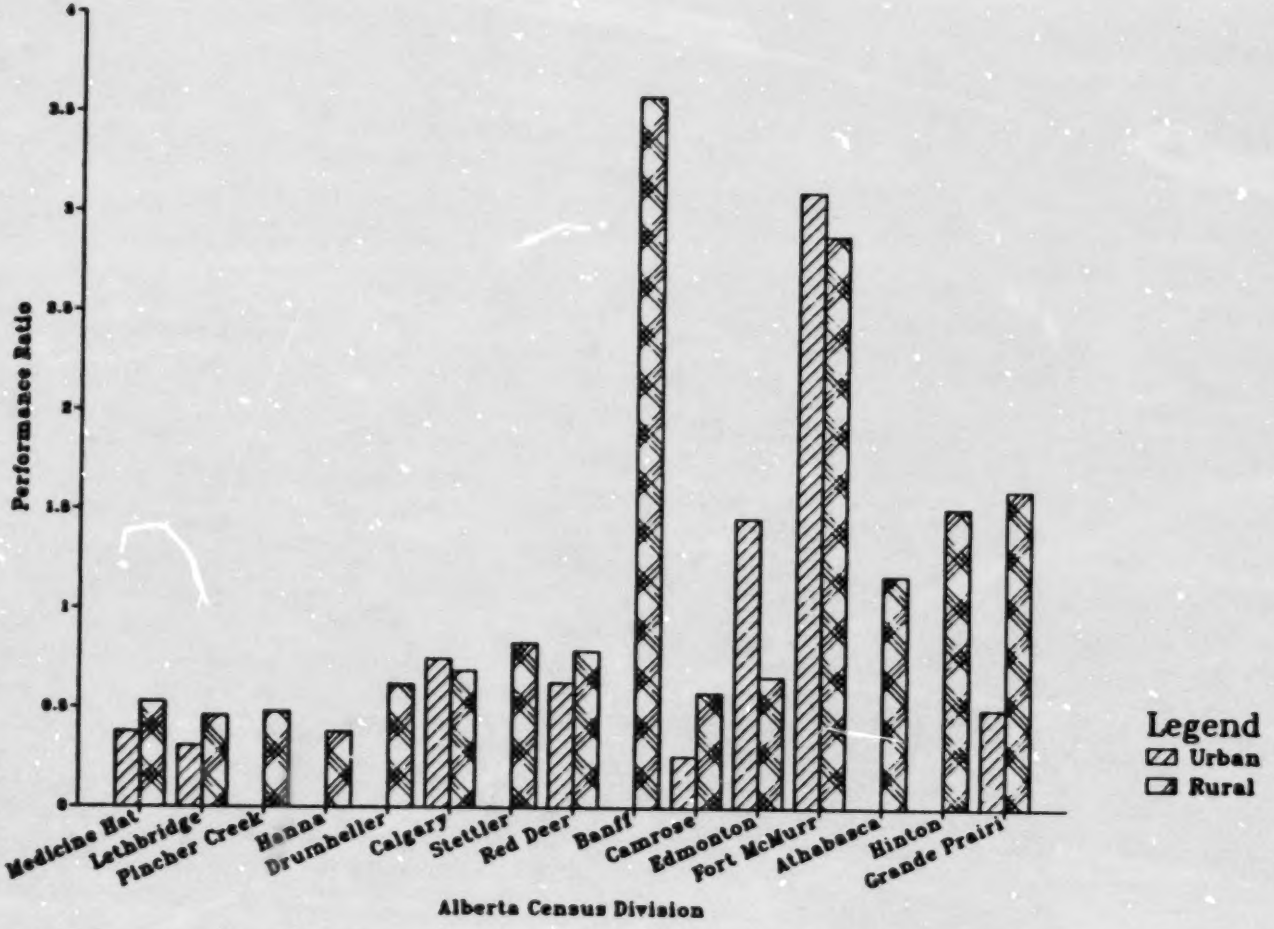

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Table 1.
Performance Ratio Comparison of Athabasca University Students to Alberta Population by Census Division in Fiscal Year 1981/82[6]

Census Division and Major Urban Centre	1981 Population	Per Cent of Total	1981/82 Students	Per Cent of Total	Performance Ratio
1 Medicine Hat	55,375	2.47	36	.97	.39
2 Lethbridge	110,477	4.94	72	1.95	.39
3 Pincher Creek	35,652	1.59	25	.65	.41
4 Hanna	12,119	.54	9	.24	.44
5 Drumheller	38,382	1.72	42	1.14	.66
6 Calgary	668,682	29.88	707	19.12	.64
7 Stettler	40,071	1.79	57	1.54	.86
8 Red Deer	123,642	5.53	166	4.49	.81
9 Banff	21,670	.96	57	1.54	1.60
10 Camrose	78,417	3.50	79	2.14	.61
11 Edmonton	762,041	34.05	1,462	39.55	1.16
12 Fort McMurray	84,221	3.76	460	12.44	3.31
13 Athabasca	53,701	2.39	113	3.06	1.28
14 Hinton	24,635	1.10	41	1.11	1.01
15 Grande Prairie	128,639	5.75	321	8.68	1.51
Total	2,237,724	100.00	3,646	98.62	-

[6] There were 51 students from Alberta who could not be matched with an Alberta census division. Figures for Alberta 1981 population were obtained from Statistics Canada. (1981). *1981 census of Canada: Population geographic distributions - Alberta.* Catalogue No. 93-909. Ottawa, Ontario: Ministry of Supply and Services Canada.

Table 2.
Performance Ratio Comparison of Athabasca University Students by Alberta Census Division from Fiscal Years 1978/79 to 1980/81[7]

Census Division and Major Urban Centre	1978/79 Students	Performance Ratio	1979/80 Students	Performance Ratio	1980/81 Students	Performance Ratio
1 Medicine Hat	15	.34	12	.23	18	.24
2 Lethbridge	35	.40	34	.34	47	.34
3 Pincher Creek	15	.52	12	.36	18	.39
4 Hanna	4	.37	9	.74	14	.83
5 Drumheller	40	1.29	19	.54	36	.73
6 Calgary	177	.35	241	.40	521	.61
7 Stettler	42	1.29	60	1.63	46	.92
8 Red Deer	66	.72	90	.84	133	.87
9 Banff	28	1.49	27	1.22	48	1.50
10 Camrose	49	.80	47	.66	69	.69
11 Edmonton	736	1.26	922	1.34	1,167	1.19
12 Fort McMurray	321	5.51	317	4.64	414	4.28
13 Athabasca	36	.82	53	1.04	63	.88
14 Hinton	20	1.19	21	1.12	28	1.08
15 Grande Prairie	124	1.27	141	1.26	223	1.45
Total	1,708	-	2,005	-	2,845	-

[7] Population figures were obtained from Economic and Demographic Models Unit. (1981). *Census division population projections: Alberta 1977-1991.* Edmonton, Alberta: Bureau of Statistics, Alberta Treasury. Population figures for each fiscal year have not been adjusted to reflect the change in geographic composition of Alberta census divisions and definition that has occurred.

Table 3.
Geographic Distribution of Athabasca University Students by Alberta Census Division from Fiscal Years 1978/79 to 1980/81[8]

Census Division and Major Urban Centre	1978/79 Per Cent of Total	1979/80 Per Cent of Total	1980/81 Per Cent of Total
1 Medicine Hat	.88	.60	.63
2 Lethbridge	2.05	1.70	1.65
3 Pincher Creek	.88	.60	.63
4 Hanna	.23	.45	.49
5 Drumheller	2.34	.95	1.27
6 Calgary	10.36	12.02	18.31
7 Stettler	2.46	2.99	1.62
8 Red Deer	3.86	4.49	4.68
9 Banff	1.64	1.35	1.69
10 Camrose	2.87	2.34	2.43
11 Edmonton	43.09	45.99	41.02
12 Fort McMurray	18.79	15.81	14.55
13 Athabasca	2.11	2.64	2.21
14 Hinton	1.17	1.05	.98
15 Grande Prairie	7.26	7.03	7.84
Total	100.00	100.00	100.00

[8] Some totals may not add up to 100 per cent because of rounding.

Table 4.
Geographic Distribution of Athabasca University Students by Province and Territory from Fiscal Years 1978/79 to 1981/82[9]

Province and Territory	1978/79 Students	1979/80 Students	1980/81 Students	1981/82 Students
Newfoundland	-	3	-	1
Nova Scotia	1	3	4	6
New Brunswick	4	2	10	7
Quebec	2	11	10	9
Ontario	16	19	37	52
Manitoba	4	14	18	41
Saskatchewan	34	58	90	163
Alberta	1,708	2,005	2,845	3,697
British Columbia	805	1,032	900	1,051
Northwest Territories	27	49	61	130
Yukon	6	7	22	29
Missing	107	263	80	128
Total	2,714	3,466	4,077	5,314
Outside Alberta	899	1,198	1,152	1,617

[9] Figures for years previous to 1981/82 were obtained from Hammer, P. (1981). *Geographic distribution of Athabasca University students.* Edmonton, Alberta: Office of Institutional Studies, Athabasca University.

Table 5.
Alberta Population by Census Division
from 1978 to 1980[10]

Census Division and Major Urban Centre	1978 Population	Per Cent of Total	1979 Population	Per Cent of Total	1980 Population	Per Cent of Total
1 Medicine Hat	51,400	2.62	52,430	2.60	54,170	2.60
2 Lethbridge	99,840	5.10	100,520	4.98	101,460	4.87
3 Pincher Creek	33,270	1.70	33,340	1.65	33,320	1.60
4 Hanna	12,240	.62	12,300	.61	12,350	.59
5 Drumheller	35,630	1.82	35,760	1.77	35,970	1.73
6 Calgary	573,910	29.29	599,740	29.71	626,370	30.08
7 Stettler	37,190	1.90	37,010	1.83	36,880	1.77
8 Red Deer	104,370	5.33	108,270	5.36	112,020	5.38
9 Banff	21,620	1.10	22,500	1.11	23,470	1.13
10 Camrose	70,680	3.61	72,140	3.57	73,670	3.54
11 Edmonton	671,080	34.25	693,540	34.36	717,840	34.47
12 Fort McMurray	66,720	3.41	68,760	3.41	70,880	3.40
13 Athabasca	50,190	2.56	51,060	2.53	52,370	2.51
14 Hinton	19,110	.98	18,910	.94	18,850	.91
15 Grande Prairie	112,220	5.73	112,400	5.57	112,820	5.42
Total	1,959,470	100.00	2,018,680	100.00	2,082,440	100.00

[10] Figures were obtained from Economic and Demographic Models Unit. (1981). *Census division population projections: Alberta 1977-1991.* Edmonton, Alberta: Bureau of Statistics, Alberta Treasury.

Table 6.
Urban-Rural Distribution of Athabasca University
Students by Province and Territory
in Fiscal Year 1981/82[11]

Province and Territory	Number of Rural Students	Per Cent of Total	Number of Urban Students	Per Cent of Total
Newfoundland	-	-	-	-
Nova Scotia	2	-	4	.1
New Brunswick	4	.1	5	.1
Quebec	2	-	5	.1
Ontario	13	.3	38	.7
Manitoba	13	.3	28	.5
Saskatchewan	67	1.3	93	1.8
Alberta	1,338	26.3	2,308	45.3
British Columbia	360	7.1	675	13.2
Northwest Territories	78	1.5	34	.7
Yukon	9	.2	20	.4
Total	1,886	37.0	3,211	63.0
Outside Alberta	548	10.7	903	17.7

[11] There were 217 students would could not be matched with an urban-rural area.

Table 7.
Performance Ratio Comparison of Athabasca University Students to Alberta Population by Census Division According to Urban-Rural Distribution in Fiscal Year 1981/82

Census Division and Major Urban Centre	Per Cent of Total Rural Students	Per Cent of Total Urban Students	Per Cent of Total Rural Population	Per Cent of Total Urban Population	Performance Ratio Rural	Performance Ratio Urban
1 Medicine Hat	1.0	1.0	1.87	2.65	.53	.38
2 Lethbridge	2.9	1.4	6.31	4.53	.46	.31
3 Pincher Creek	1.8	-	3.74	.96	.48	-
4 Hanna	.7	-	1.83	.16	.38	-
5 Drumheller	3.1	-	5.02	.74	.62	-
6 Calgary	5.6	27.4	8.11	36.31	.69	.75
7 Stettler	4.3	-	5.21	.78	.83	-
8 Red Deer	7.7	2.7	9.71	4.29	.79	.63
9 Banff	4.3	-	1.20	.90	3.58	-
10 Camrose	5.1	.5	8.84	1.93	.58	.26
11 Edmonton	12.8	55.9	19.49	38.36	.66	1.46
12 Fort McMurray	18.3	9.3	6.36	3.00	2.88	3.10
13 Athabasca	8.4	-	7.20	.98	1.17	-
14 Hinton	3.1	-	2.05	.82	1.51	-
15 Grande Prairie	20.9	1.8	13.05	3.59	1.60	.50
Total	100.00	100.00	100.00	100.00	-	-

Table 8.
Geographic Distribution of Athabasca University Students by Alberta Municipality in Fiscal Year 1981/82[12]

Alberta Municipality	1981/82 Students	Per Cent of Total
Athabasca	23	.4
Calgary	642	12.1
Drayton Valley	23	.4
Edmonton	1,073	20.2
Edson	21	.4
Fort Chipewyan	22	.4
Fort McMurray	216	4.1
Fort Saskatchewan	30	.6
Fox Creek	22	.4
Grande Prairie	41	.8
Lethbridge	33	.7
Medicine Hat	22	.4
Medley	21	.4
Morinville	25	.5
Peace River	35	.7
Ponoka	21	.4
Red Deer	63	1.2
Sherwood Park	74	1.4
Spruce Grove	26	.5
St. Albert	100	1.9
St. Paul	94	1.8
Valleyview	41	.8
Wetaskiwin	21	.4
Other	995	18.7
Sub-total	3,684	69.3
Missing	1,630	30.7
Total	5,314	100.00

[12] The "Sub-total" figures represent students who could be matched with an Alberta municipality. All municipalities with less than 20 registered students are reported as "Other". Students who could not be matched with an Alberta municipality are reported as "Missing".

Appendix 1.
Record Layout for Geographical Classification
Code Conversion File[13]

Field	Size	Position	Type	Description
1				Postal Code
1.1	3	1-3	AN	Forward Sortation Area
1.2	3	4-6	AN	Local Delivery Unit
2				Standard Geographical Classification (1981)
2.1	2	7-8	AN	Province
2.2	2	9-10	AN	Census Division
2.3	3	11-13	AN	Census Sub-division
3	5	14-18	AN	Census Tract (1981)
4	6	19-24	AN	Enumeration Area (1976)
5	1	25	N	Regional Office Code
6	1	26		Blank
7	3	30-31	AN	Census Metropolitan Area (1976)
8	2	30-31	AN	Sub-provincial Region (1981)
9	2	32-33	AN	Labour Force Survey (1981)
10	3	34-36	AN	Census Metropolitan Area (1981)
11				Standard Geographical Classification (1976)
11.1	2	37-38	AN	Census Division
11.2	3	39-41	AN	Census Sub-division
12	9	42-50		Blank

[13] "AN" represents an alphanumeric and "N" represents a numeric.

Appendix 2.
Statistics Canada Postal Code File[14]

Province	First Letter of Postal Code	Number of Postal Codes
Newfoundland	A	5,994
Prince Edward Island	C	2,320
Nova Scotia	B	16,320
New Brunswick	E	11,821
Quebec	G,H,J	143,867
Ontario	K,L,M,N,P	204,400
Manitoba	R	20,088
Saskatchewan	S	18,830
Alberta	T	51,123
British Columbia	V	90,269
Yukon	Y	751
Northwest Territories	X	429
Total	-	566,305

[14] This file contains all postal codes in existence as of January 1982. There are 566,305 postal codes on the file representing an additional 8,120 more than the 1981 version. Its present coverage of Canada is about 88 per cent.

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